

ABSTRACT

The present invention relates to a high-voltage insulation system which is suitable for low temperatures and which, in addition to a cooling liquid (3) comprises a solid material insulator (2) based on a cellulose fabric (20). The solid material insulator (2) is preferably used in the form of pressboards and is impregnated with a polymer resin (21). It has a high partial discharge inception field of 77 K and, in addition, its thermal coefficient of expansion is optimally matched to that of ceramic high-temperature superconductors. The pressboards can be formed in the dry stage, in particular to produce coil formers, and are joined together alternately with cotton fabrics to form laminates of any desired thickness.

Figure 1